

**REMARKS/ARGUMENTS**

Claims 1-27 remain pending in the application. The claims were rejected in the Office Action dated January 30, 2007. Applicant respectfully traverses the rejections and requests reconsideration and allowance of all pending claims.

**Discussion of Rejections Under 35 U.S.C. §103**

The Examiner maintains the grounds for rejection previously presented in the Office Action dated August 25, 2006. In particular, Claims 1-3 and 5-27 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,920,329 to Kennedy et al. (hereinafter Kennedy) in view of U.S. Patent No. 6,445,917 to Bark et al. (hereinafter Bark). Claim 4 was rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Kennedy in view of Bark and U.S. Patent Application Publication No. 20020039905 to Remy (hereinafter Remy).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all of the claim limitations.

Applicant contends that a *prima facie* case for obviousness has not been established and respectfully traverses the rejections. In particular, Applicant contends that the references, either alone or in combination, fail to teach or suggest all claimed features. Additionally, there is no motivation to modify the references in a manner that would result in Applicant's claimed invention.

**Kennedy In View Bark Fail to Teach or Suggest All Claimed Features**

Claim 1 is duplicated below, in its entirety, to facilitate the discussion of its various features.

1. A method for identifying transmitters in a wireless communication system, comprising:
  - obtaining a plurality of received signals for a plurality of transmitters; and
  - determining a transmitter for each received signal by
    - determining a list of candidate transmitters for the received signal,
    - obtaining predicted power for each candidate transmitter in the list, and

identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal.

The Examiner relies on the description in Kennedy as providing the basis for the rejections. However, as previously described in Applicant's Response, dated November 20, 2006, Kennedy describes a method of determining where to place position location equipment within a wireless system. *See, Kennedy*, at Col. 1, ll. 24-29 (“[Kennedy] is directed to the selection and positioning of mobile-appliance location determining sensors in a wireless communication network. The disclosure assists in the pre-installation design of a mobile-appliance location determining system which utilizes a network infrastructure overlay location approach.”).

Kennedy does not describe a manner of determining position location or a manner of determining an identity of a transmitter. Instead, Kennedy determines where to place location determining sensors when designing a communication system. *See, id.*, at Col. 2, ll. 51-54.

**Claim 1** recites: “A method for identifying transmitters in a wireless communication system.” The Examiner contends that Kennedy teaches a method for identifying transmitters, and cites to Kennedy, at Col. 4, ll. 58-61. *See, Office Action*, dated January 30, 2007, at 2. The cited portion of Kennedy states “*The base stations which are estimated to receive a signal of sufficient strength are identified and participate in determining a location determining accuracy.*” *Kennedy*, at Col. 4, ll. 58-61 (*emphasis added*). In contrast to the Examiner's interpretation, the cited portion of Kennedy expressly describes identifying base stations that *receive a sufficient signal strength*. The cited portion of Kennedy does not refer to identifying transmitters, but instead describes identifying receiving base stations.

The method of claim 1 includes: “determining a transmitter for each received signal,” and further details the process by which the transmitters are determined. The Examiner contends that Kennedy at Col. 4, ll. 54-61 and FIG. 2 teach or suggest this claimed feature. *See, Office Action*, at 2.

Kennedy describes “defining a set of points that span the coverage area in grid-like fashion having separations between spanning points on the order of 100-500 meters.” *Kennedy*, at Col. 4, ll. 38-41. For each point in the grid, “estimates of the *transmit power of the mobile-appliance* are made.” *Id.*, at Col. 4, ll. 35-38 (*emphasis added*).

The portion of Kennedy relied upon by the Examiner states: "The received signal strength is estimated 230 for each of the base stations in the vicinity of the mobile-appliance for each of the spanning points in the coverage area based on the estimated propagation characteristics, the estimated mobile transmit power and the base station capabilities." *Id.*, at Col. 4, ll. 54-58. In this portion of Kennedy, the term "received signal strength" refers to the strength of the signal transmitted by the mobile appliance at each of the receiving base stations. Thus, the cited portion of Kennedy does not teach or suggest "determining a transmitter for each received signal," as claimed.

The portion of Kennedy cited by the Examiner describes estimating the received signal strength at various base stations that originate from a *single mobile appliance*. The base stations do not attempt to "determine[c] a transmitter for each received signal," as claimed, where each transmitter refers to each of the plurality of transmitters corresponding to the plurality of received signals recited in the prior claimed element. Kennedy fails to teach or suggest the claimed feature of "determining a transmitter for each received signal," in part, because Kennedy describes a single mobile appliance as the transmitter.

Indeed, Kennedy describes a manner of "determining the positioning of mobile-appliance location determining sensors in a mobile-appliance communications network. *Kennedy*, Abstract. *See, also, id.*, at Col. 2, ll. 59-62 ("It is further an object of the present invention to provide a novel system and method of positioning location determining sensors based on estimated accuracies without the necessity of actually measuring communication signals.") Thus, Kennedy describes a model that does not require actually using a mobile-appliance to transmit signals, but instead estimates received signals strength for a hypothetical mobile-appliance transmit power. Kennedy fails to teach or suggest identifying the transmitter for a received signal, because the mobile-appliance described in Kennedy is a hypothetical model of a mobile-appliance not an actual device for which the identity is relevant, and the signal strength estimates at the base stations are determined "based on the estimated propagation characteristics, the estimated mobile transmit power, and the base station capabilities." *Kennedy*, at Col. 4, ll. 56-58.

FIG. 2 from Kennedy provides no teachings or suggestions different from those portions discussed above. Indeed, the cited portions from Kennedy are from the text that describes FIG. 2.

Kennedy necessarily fails to describe each element of the claimed process for "determining a transmitter for each received signal" because Kennedy fails to describe the general aspect of "determining a transmitter for each received signal." However, Applicant addresses at least some of the claimed features for the sake of completeness.

Claim 1 features, as part of "determining a transmitter for each received signal," "determining a list of candidate transmitters for the received signal." The Examiner contends that Kennedy teaches this claimed feature at Col. 4, ll. 54-56.

However, as described above, the cited portion from Kennedy describes estimating the received signal strength at multiple base stations for a *single* mobile appliance. Kennedy fails to teach or suggest "determining a list of candidate transmitters for the received signal," because there is only one source for the signals received at the base stations, the sole mobile-appliance. There is no description of determining a list of candidate transmitters because Kennedy describes estimating received signal strengths from a hypothetical single mobile-appliance. There are no candidates for single model of a mobile appliance.

Claim 1 also features "identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal" as part of the claimed feature of "determining a transmitter for each received signal." As discussed above, Kennedy describes a system model and does not describe actual signal transmissions or signal receptions. Indeed, Kennedy states: "It is further an object of the present invention to provide a novel system and method of positioning location determining sensors based on estimated accuracies *without the necessity of actually measuring communication signals.*" Kennedy, at Col. 2, ll. 59-62 (*emphasis added*).

Claim 1 expressly features "identifying the transmitter...based on...measured power for the received signal." Kennedy fails to teach at least this claimed feature because Kennedy expressly describes a process that operates "*without the necessity of actually measuring communication signals.*" Kennedy, at Col. 2, ll. 61-62 (*emphasis added*). The Examiner concedes that Kennedy fails to teach this claimed feature but contends that Bark teaches this feature, and cites to Bark, at Col. 6, ll. 58-66 and Col. 7, ll. 2-4.

As previously discussed by the Applicant in the response, dated November 20, 2006, the cited portion of Bark fails to describe "identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal," as claimed. The cited portion of Bank fails to describe predicted power,

and fails to describe identifying a transmitter based on predicted power. Instead, Bark describes an example in which the received signal strength of a base station is monitored, and the mobile station sends a report if a predetermined event occurs. There is nothing in the cited portion that teaches or suggests that the mobile station uses predicted powers or that the mobile station identifies a base station based on predicted powers and measured received power.

The Examiner contends that the claimed "predicted power" corresponds to the "predetermined event" described in Bark. *See, Office Action*, at 2-3. However, even if the claimed term "predicted power" can fall within the scope of the term "predetermined event" as suggested by the Examiner, Bark fails to describe "identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal," as claimed.

Bark merely describes a mobile station sending a report to a radio network, where the contents of the report can include identification of the cell. Bark fails to describe the mobile station determining the identity of the transmitter based on the predicted power. At best, Bark describes sending a message having the identity of a cell to a radio network. Sending a message to the radio network in response to an event does not describe how the mobile station determines the identity of the transmitter. Therefore, Bark fails to describe "identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal," as claimed.

Kennedy fails to teach or suggest "A method for identifying transmitters in a wireless communication system." Kennedy fails to teach or suggest the claimed features of "determining a transmitter for each received signal," "determining a list of candidate transmitters for the received signal," or "identifying the transmitter for the received signal based on predicted powers for the candidate transmitters and measured power for the received signal." The Examiner does not cite to any other reference as teaching or suggesting these claimed features. The combination of Bark with Kennedy fails to satisfy the deficiencies of Kennedy. Indeed, Bark fails to teach or suggest the claimed feature that the Examiner contends is described in Bark and that the Examiner concedes is absent from Kennedy.

Applicant's analysis demonstrates that Kennedy fails to teach or suggest several claimed features. Applicant's discussion further demonstrates that Bark fails to teach or

suggest the feature the Examiner concedes is absent from Kennedy. Therefore, the combination of Kennedy with Bark fails to teach or suggest all claimed features. Applicant respectfully requests reconsideration and allowance of claim 1.

The Examiner alleges that Applicant argues against the references individually. *See, Office Action*, at 14. However, Applicant expressly discussed how the references, *whether alone or in combination*, fail to teach or suggest every claimed feature. *See, Response*, dated November 20, 2006, at 4.

**Claims 13, 19, and 27** include features similar to those discussed above in relation to claim 1.

In particular, claim 13 includes: "obtaining a plurality of received signals for a plurality of transmitters," "determining a transmitter for each received signal", "determining a list of candidate transmitters for the received signal," and "determining the transmitter for the received signal based on predicted powers for the candidate transmitters, the predicted power for the identified transmitter, measured power of the received signal, and measured power for the identified transmitter." Claim 19 includes "means for identifying the transmitter for each received signal based on measured power for the received signal and predicted powers for the candidate transmitters in the list determined for the received signal." Similarly, claim 27 includes "code for identifying the transmitter for each received signal based on measured power for the received signal and predicted powers for the candidate transmitters in the list determined for the received signal."

Each of claims 13, 19, and 27 is believed to be allowable at least for the reasons presented above in relation to claim 1. Applicant respectfully requests reconsideration and allowance of claims 13, 19, and 27.

**Claims 2-12, 14-18, and 20-26** depend from one of independent claims 1, 13, or 19 and are believed to be allowable at least for the reason that they depend from an allowable base claim. Applicant respectfully requests reconsideration and allowance of claims 2-12, 14-18, and 20-26.

**There is No Motivation to Combine The Teachings of Kennedy and Bark**

The Examiner argues that it would be obvious to combine the teachings of Kennedy with those of Bark. However, the general motivation to combine references espoused by the Examiner is not sufficient to make the selective combination argued by the Examiner.

The Examiner argues that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include identifying a transmitter based on a predicted powers and measured power for received signal because identifying the transmitter in Kennedy, Jr. using the received signal strength measurements in Bark...in addition to the estimated signal strength for the candidate transmitters in Kennedy, Jr. ...would allow for improved accuracy in location determining systems." *See, Office Action*, at 3.

As described above, Kennedy is directed to "determining the positioning of mobile-appliance location determining sensors in a mobile-appliance communications network. *Kennedy*, Abstract. Also, as noted above, Kennedy states: "It is further an object of the present invention to provide a novel system and method of positioning location determining sensors based on estimated accuracies *without the necessity of actually measuring communication signals*." *Kennedy*, at Col. 2, ll. 59-62 (*emphasis added*).

Bark is directed to "event-based or driven reporting of mobile station measurements." *Bark*, Abstract. Bark does not describe a method of position location.

The Examiner states that the combination of Kennedy with Bark "would allow for improved accuracy in location determining systems." However, there is nothing in this supposed motivation that would lead one of ordinary skill in the art to look to Bark, much less to look to the particular feature from Bark that the Examiner extracts for selective combination with Kennedy.

In direct contrast, Bark describes event-based reporting of mobile station measurements, but Kennedy expressly states: "It is further an object of the present invention to provide a novel system and method of positioning location determining sensors based on estimated accuracies *without the necessity of actually measuring communication signals*." *Kennedy*, at Col. 2, ll. 59-62 (*emphasis added*). Thus, Kennedy expressly teaches away from using actual measurements of communication signals.

Thus, the Examiner presents a motivation to combine event-based reporting of mobile measurements into a system that is designed to operate in the absence of any actual measurements of communication signals.

There is nothing in the Examiner's motivation that would lead one of ordinary skill in the art to Bark. Furthermore, Kennedy expressly teaches away from the combination argued

by the Examiner. Thus, the Examiner's motivation to combine is not supported by the references, and in fact is expressly discouraged by the Kennedy reference.

The Examiner fails to provide a reasonable motivation to combine the references, and in particular, to make the selective combination relied upon for the rejections. Applicant respectfully requests reconsideration and allowance of all claims for the independent reason that there is no motivation to combine the teachings of the references.

Discussion of Rejections Under 35 U.S.C. §101

Claim 27 is rejected under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter.

However, the USPTO Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, published November 2, 2005 in the Official Gazette explicitly states:

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. *In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.* See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions. *USPTO Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, Annex IV, (*emphasis added*).

Claim 27 recites a computer program product that explicitly includes "a computer-usable medium for storing the codes." The computer program product includes the computer readable medium encoded with the computer program.

Thus, claim 27 is statutory subject matter, as expressly provided for in the USPTO guidelines. Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. §101.

CONCLUSION



Applicant believes that all claims pending in the application are allowable. Applicant therefore respectfully requests that a timely Notice of Allowance be issued in this case. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned.

Respectfully submitted,

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By: /Andrea L. Mays/  
Andrea L. Mays  
Attorney for Applicant  
Registration No. 43,721

QUALCOMM Incorporated  
5775 Morehouse Drive  
San Diego, California 92121-2779  
Telephone: (858) 651-8546  
Facsimile: (858) 658-2502